

BANGALORE UNIVERSITY

DEPARTMENT OF CIVIL ENGINEERING

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JNANA BHARATHI
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BUB/CTE/2020-21/Steel

Date: 06-06-2020

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 8, 10, 12mm.

{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward
No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS 1786-2008

TABLE - 1

SL No	Details	For 8 mm		For 10mm		For 12mm	
		Test Results	Min. Req as per IS 1786-2008	Test Results	Min. Req as per IS 1786-2008	Test Results	Min. Req. as per IS 1786-2008
01	Observed diameter of bar	8.0mm	8.0mm	10.0mm	10.0mm	12.0mm	12.0mm
02	Observed Wt/m Length Kg/m	0.403	0.363	0.621	0.567	0.892	0.834
03	Proof stress/Yield stress, fy, N/mm ²	562.0	500.0	552.0	500.0	558.0	500.0
04	Bend/ Re bend Test	Ok	---	Ok	---	Ok	---
05	Percentage of Elongation, %	20.10	12.00	21.90	12.00	20.50	12.00
06	Ultimate Tensile Strength N/mm ²	644.0	545.0	622.0	545.0	638.0	545.0

*As Furnished by Client.

The Results relate only to the items tested.

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JNANA BHARATHI
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BUB/CTE/2020-21/CA-

Date: 06-06-2020

TESTING OF COARSE AGGREGATES (20 and 40mm):

Sub: Testing of Aggregates 20 and 40mm.

{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS:2386 & IS 383-1970 (Reaffirmed on 2007)

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	<u>Percentage passing</u>	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	20 mm Sample	Single size	Graded
40 mm	100.00	100.00	100.00
20 mm	98.20	85-100	95 - 100
10 mm	42.10	0 - 20	25 - 55
4.75 mm	Nil	0 - 5	0 - 10

TABLE 1.2 :

IS Sieve Size, mm	<u>Percentage passing</u>	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	40 mm Sample	Single size	Graded
40mm	96.30	85-100	95 - 100
20mm	45.00	0 -20	30- 70
10mm	25.40	0 -5	10- 35
4.75mm	Nil	-----	0 - 5

*As Furnished by Client.

The Results relate only to the items tested.

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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೃಂಗೇರಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ಪಾಲಿಕೆ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಬಿ.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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BANGALORE - 560 056

BUB/CTE/2020-21/MS

Date: 06-06-2020

1. TESTING OF FINE AGGREGATES (ROBO SAND):

Sub: Testing of Robo Sand/M.Sand.

{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS:2386 & IS 383-1970 (Reaffirmed on 2007)

TABLE - 1.1 : SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2007)				Remarks
		Percentage Passing				
		Zone-I	Zone-II	Zone -III	Zone -IV	
10.00	100.00	100	100	100	100	The Sample Conforms to Grading Zone-II
04.75	94.70	90-100	90-100	90-100	95-100	
02.36	87.00	60-95	75-100	85-100	95-100	
01.18	74.20	30-70	55-90	75-100	90-100	
600. mic	46.00	15-34	35-59	60-79	80-100	
300.mic	27.00	5-20	8-30	12-40	15-50	
150.mic	8.20	0-10	0-10	0-10	0-15	

TABLE 1.2 :

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2007)
1.	Specific Gravity	001	2.63	-----

*As Furnished by client.

The Results relate only to the items tested



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ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶಿಬಿರಕ್ಕೆ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.



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JNANA BHARATHI
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BUB/CTE/2020-21/Cement

Date: 10-06-2020

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).

{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward
No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 01-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla Super
Grade * : 53
Type * : OPC
Date : 02-06-2020 to 09-06-2020

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	154 min	Shall not be less than 30 min
2	Final setting time	255 min	Shall not be more than 600 min
3	Fineness – Specific surface of cement (by Blaine's air permeability method)	2894 Sq.cm/g	Shall not be less than 2250 Sq.cm/g
4	Soundness test(by Le-Chatelier's method)	1.40 mm	Shall not be more than 10 mm
5	Compressive strength		
	a) 3 days (average of three results) b) 7 days (average of three results)	29.40 N/ Sq mm 42.20 N/Sq mm	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

*As Furnished by Client.

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BUB/CTE/2020-21/Cube

Date: 17-06-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 07 days Compressive Strength

{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward
No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 16-06-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS: 516

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE
CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M₂₀

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm ²	Maximum Load in K.N	Compressive Strength (N/ mm ²)	Avg. Value
1	001	09-06-20	16-06-20	07	22500	400	17.78	17.63
	002	"	"	"	"	390	17.33	
	003	"	"	"	"	400	17.78	

* As furnished by Client.

The Results relate only to the items tested.



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BUB/CTE/2020-21/Cube

Date: 08-07-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes for 28 days Compressive Strength

{Project*: Improvements to Roads & Drains in Gangamma Police Station beside road in Ward
No.12, Shettyhalli, Shettyhalli Sub-Division}

Ref: Letter No. Testing/BUB/2020-21, dated 07-07-2020

Sample supplied to lab by : M/s.KRIDL, Bangalore.

Report required for: Executive Engineer,
Dasarahalli Division,
BBMP, Bangalore.

Technical Reference: IS: 516

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE
CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M₂₀

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm ²	Maximum Load in K.N	Compressive Strength (N/ mm ²)	Avg. Value
1	001	09-06-20	07-07-20	28	22500	540	24.00	23.48
	002	"	"	"	"	520	23.11	
	003	"	"	"	"	525	23.33	

* As furnished by Client.

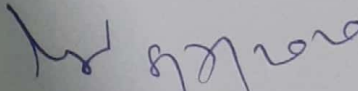
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